

FOCUS

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2021 Vital Statistics

COVID-19 continued to dominate Missouri mortality in 2021 as it did in 2020. The total Missouri resident death count of 73,831 was just slightly below the record count 73,883 in 2020, when deaths increased by about 19 percent over 2019. Births were also nearly the same in 2021 as in 2020 as 69,269 Missouri babies were born compared with 69,277 in 2020. The result was that deaths out-numbered births in 2021 as they did in 2020. This is referred to as a natural decrease, and 2020 and 2021 are the only two years that has happened since Missouri began keeping centralized vital statistics in 1911 (See Table 1). The natural decrease in 2021 was 4,562 compared with 4,606 in 2020.

The state life expectancy decreased again in 2021, this time from 75.0 years in 2020 to 74.6 years in 2021. This is the lowest life expectancy in Missouri in about 40 years. The 2020 life expectancy had decreased by over two years from the pre-pandemic level of 77.4 in 2019. Male life expectancy decreased by 0.5 years from 72.2 in 2020 to 71.7 years in 2021. Female life expectancy decreased by 0.2 years from 78.0 in 2020 to 77.8 years in 2021. The difference in life expectancy between the two genders increased to 6.1 years, the largest difference since 1997.

As reflected in Table 2, COVID-19 was again the third leading cause of death in Missouri in 2021, as heart disease and cancer continued as numbers one and two, respectively.

Table 1

Vital Statistics for Missouri: 2011, 2019, 2020 and 2021

	<i>Numbers</i>				<i>Rates per 1,000 Population</i>			
	2011	2019	2020	2021	2011	2019	2020	2021
Births	76,069	72,103	69,277	69,269	12.7	11.7	11.3	11.2
Deaths	55,599	62,155	73,883	73,831	9.3	10.1	12.0	12.0
Natural increase	20,470	9,948	-4,606	-4,562	3.4	1.6	-0.7	-0.7
Marriages	39,481	36,636	34,425	36,733	6.6	6.0	5.6	6.0
Divorces	23,272	17,740	16,406	18,107	3.9	2.9	2.7	2.9
Infant deaths	482	432	392	393	6.2*	6.0*	5.7*	5.7*
Abortions	9,234	4,660	3,391	3,639	121.4*	64.6*	48.9*	52.9*
Population (1000s)	6,010	6,140	6,152	6,168				

*Per 1,000 live births

Table 2
Leading Causes of Death with Rates: Missouri Residents 2011, 2020 and 2021

	<i>Numbers</i>			<i>Rates per 100,000 Population</i>			<i>Percent Change</i>	
	2011	2020	2021	2011	2020	2021	2011-2021	2020-2021
Leading Causes of Death								
Heart Disease	13,746	15,932	15,716	228.7	259.0	254.8	11.4	-1.6
Cancer	12,403	12,907	13,146	206.4	209.8	213.1	3.3	1.6
COVID-19	0	7,134	7,757	0.0	116.0	125.8	NA	8.4
Unintentional injury	3,179	4,411	4,814	52.9	71.7	78.0	47.6	8.8
Motor vehicle	830	1,031	1,055	13.8	16.8	17.1	23.9	2.1
Falls	690	869	854	11.5	14.1	13.8	20.6	-2.0
Poisonings	856	1,808	2,100	14.2	29.4	34.0	139.0	15.8
Other	803	703	805	13.4	11.4	13.1	-2.3	14.2
Chronic lung disease	3,483	3,877	3,624	58.0	63.0	58.8	1.4	-6.8
Stroke	3,010	3,275	3,177	50.1	53.2	51.5	2.8	-3.3
Alzheimer's disease	1,916	2,873	2,518	31.9	46.7	40.8	28.1	-12.6
Diabetes	1,421	1,844	1,876	23.6	30.0	30.4	28.6	1.5
Nephritis & nephrosis	1,251	1,682	1,542	20.8	27.3	25.0	20.1	-8.6
Suicide	921	1,125	1,174	15.3	18.3	19.0	24.2	4.1
Other Selected Causes								
Pneumonia & influenza	1,200	1,169	885	20.0	19.0	14.3	-28.1	-24.5
Homicide	416	802	716	6.9	13.0	11.6	67.7	-11.0
Opioid Deaths	582	1,375	1,581	9.7	22.4	25.6	164.7	14.7
Firearm Deaths	844	1,425	1,414	14.0	23.2	22.9	63.2	-1.0
Total	55,599	73,883	73,831	925.1	1201.1	1197.0	29.4	-0.3

Notes: All causes are based on underlying cause of death except opioid deaths which include contributing causes. COVID-19 deaths as a contributing or underlying cause totaled 8,509 in 2021.

These were followed in order, by unintentional injuries (accidents), chronic lung disease, stroke, Alzheimer’s disease, diabetes, nephritis (kidney disease), and suicide. The only change from 2020 was that suicide replaced pneumonia and influenza as the 10th leading cause of death. Half the leading causes increased in 2021 and half decreased.

COVID-19 deaths increased by 8.4 percent in 2021 from 7,134 in 2020 to 7,757 in 2021. Part of the reason for the increase was that COVID was active the entire year whereas in 2020 it was not active until March. Nationally, the COVID-19 death rate increased by about 20 percent in 2021, but the crude national COVID-19 death rate in 2021 was nearly the same as in Missouri (125.2 per 100,000 in U. S. and 125.8 for Missourians).

COVID-19 had a much larger effect on younger people in 2021. The median age for COVID-related deaths decreased from around 80 in 2020 to 73 years in 2021 and the number of persons under age 65 dying from COVID-19 more than doubled from 995 in 2020 to 2,432 in 2021. The Delta variant prevalent in the summer of 2021 was particularly hard on young people and the fact that elderly Missourians were more fully vaccinated are factors that may have affected the shift to a higher proportion of COVID-related deaths among younger people. COVID-19 was the underlying cause of death for 7,757 Missouri deaths in 2021 as shown in Table 2. COVID-19 was the contributing cause for an additional 752 deaths for a total of 8,509 COVID-19 related deaths in 2021.

(Focus continued)

The largest percentage increase in deaths by cause in 2021 was for unintentional injuries or accidental deaths. These types of deaths increased by 8.8 percent in 2021 and by nearly 50 percent since 2011. The increase in unintentional injury deaths was primarily associated with drug overdose deaths (accidental poisonings). Opioid-related deaths, which are included in accidental poisonings as well as some suicides and homicides, jumped by nearly

15 percent in 2021 from 1,375 in 2020 to 1,581 in 2021. The 2021 opioid-related death count was 45 percent higher than the 2019 number of 1,094. Opioid-related deaths increased throughout the state and among both whites and African-Americans. Fentanyl was the principal drug most affecting the continued high rate of opioid deaths as over 90 percent of the opioid deaths were fentanyl-related.

Table 3
Trends in Maternal and Child Health Statistics: Missouri 2011, 2020 and 2021

	<i>Numbers</i>			<i>Percents</i>		
	2011	2020	2021	2011	2020	2021
Infant Deaths	482	392	393	6.3*	5.7*	5.7*
White	285	225	232	5.0*	4.5*	4.6*
Black	150	119	116	13.7*	11.7*	12.2*
Low Birth Weight	6,015	6,037	6,158	7.9	8.7	8.9
White	3,812	3,672	3,765	6.7	7.3	7.5
Black	1,574	1,570	1,542	14.4	15.5	16.3
Inadequate Prenatal Care	12,181	14,009	12,606	17.8	21.3	19.1
White	7,282	8,159	7,386	14.2	16.9	15.2
Black	3,116	3,364	2,820	32.2	37.0	32.7
Teen(10-19) Births	6,998	3,591	3,342	9.2	5.2	4.8
White	4,463	2,218	2,096	7.9	4.4	4.2
Black	1,707	778	684	15.6	7.7	7.2
Early Teen (10-17) Births	1,931	877	817	2.6	1.3	1.2
Preterm (<37 weeks) (Obst. Est.)	7,300	7,599	7,798	9.6	11.0	11.3
Multiple Births	2,682	2,332	2,320	3.5	3.4	3.3
Birth Spacing<18 mos.	4,880	5,055	5,166	11.9	12.3	12.6
Out-of Wedlock Births	30,520	28,515	27,687	40.1	41.2	40.0
Smoking During Pregnancy	13,803	8,195	6,853	18.3	11.9	10.1
Mother Obese	17,814	21,003	21,536	24.0	30.8	31.8
Medicaid Births	33,018	27,009	26,584	45.0	39.7	39.3
WIC Births	34,692	21,322	19,187	46.6	31.6	28.3
Food Stamps Births	24,011	15,670	14,365	33.9	24.6	22.4
C-Sections	23,760	20,253	20,858	31.4	29.3	30.2
Live Births	76,069	69,277	69,269			

*Infant Death rates are per 1,000 live births.

(Focus continued)

Other leading causes with increases in deaths in 2021 included suicides (4.1 percent), cancer (1.6) and diabetes (1.5 percent). Causes of death that decreased included Alzheimer's Disease (12.6 percent), nephritis or kidney disease (8.6 percent), chronic lung disease (16.8 percent), stroke (2.2 percent) and heart disease (1.6 percent).

Homicides (not in the top ten causes) decreased by 11 percent in 2021 from a record 802 deaths in 2020. As mentioned earlier, suicides increased by 4.1 percent from 1,125 in 2020 to 1,174 in 2021. The use of firearms is a factor in both suicides and homicides. Firearm-related homicides and suicides followed the same pattern as total homicides and suicides, with firearm-related homicides decreasing and suicides increasing. About 64 percent of suicides were firearm-related while 86 percent of homicides were in 2021. Total firearm-related deaths decreased slightly from 1,425 in 2020 to 1,414 in 2021.

While the decrease in Missouri resident births was only 8 in 2021, it marked the 13th decrease in the last 14 years. Since Missouri births peaked in 2007 at 81,883 the number has decreased by 15.4 percent to 69,269 in 2021, the lowest Missouri birth number since 1976.

Between 2020 and 2021, teen births continued to decrease moving from 3,591 to 3,342 births born to mothers under the age of 20. This is a 52 percent decrease from the 2011 count of 6,998. Early teen (less than age 18) births also decreased, moving from 877 in 2020 to 817 in 2021. This is 58 percent lower than the count ten years earlier in 2011. As Table 3 reflects, teen births have experienced substantial decreases among both white and African-American teen mothers.

The infant death rate remained at the record low rate of 5.7 per 1,000 live births, the same rate as in 2020 (see Table 3). However, the African-American infant death rate increased from 11.7 to 12.2 per 1,000 live births, more than two and one half times the white rate.

The rate of low birth weight (less than 2,500 grams) infants increased to 8.9 percent in 2021 from a rate of 8.7 percent in 2020 and 7.9 percent in 2011. The

2021 low birth weight rate for African-American infants was 16.3 percent, more than double the rate for white infants of 7.5 percent. The related rate of preterm births (delivering before 37 weeks of pregnancy) also increased in 2021 to 11.3 percent from 11.0 percent in 2020 and 9.6 percent in 2011.

The rate of inadequate prenatal care decreased from 21.3 percent in 2020 to 19.1 percent in 2021, the lowest rate since 2016. Inadequate prenatal care is defined as fewer than five visits for preterm pregnancies or fewer than eight visits for term pregnancies or prenatal care beginning after the first four months of pregnancy. The rate uses the number of live births with known prenatal care as the denominator.

Other maternal and child health indicators presented in Table 3 show the following for 2021:

- The rate of out-of-wedlock births decreased from 41.2 to 40.0 percent between 2020 and 2021.
- Multiple births decreased from 3.4 percent to 3.3 percent of births.
- Short (less than 18 months) spacing between births increased from 12.3 percent in 2020 to 12.6 percent in 2021.
- The number and rate of mothers on Medicaid, WIC and Food Stamps all decreased.
- The rate of mothers smoking during pregnancy decreased to 10.1 percent in 2021 from 11.9 percent in 2020 and 18.3 percent in 2011.
- C-sections increased during the last year from 29.3 percent in 2020 to 30.2 percent in 2021.
- The rate of births to obese (BMI>30) mothers increased to 31.8 percent in 2021 from 30.8 in 2020 and 24.0 in 2011.
- Abortions (see Table 1) increased in 2021 as 3,639 Missouri resident pregnancies were terminated compared with 3,391 in 2020. This change is difficult to interpret as thousands of Missouri women obtain abortions in states that do not provide Missouri with individual abortion records.

Marriages and divorces both increased in 2021 for the first time since 2016. This might reflect rescheduling of postponed weddings and divorces because of the more restrictive shutdowns earlier in the pandemic in 2020. Marriages increased by 6.7 percent from 34,425 in 2020 to 36,733 in 2021. Divorces increased by 10.4 percent in 2021 as 18,107 Missouri marriages were dissolved compared with 16,406 in 2020. The marriage to divorce ratio decreased from 2.10 in 2020 to 2.03 in 2021.

In summary, Missouri mortality continued at record levels in 2021 primarily because of the COVID pandemic as Missouri life expectancies reached their lowest levels in 40 years. Deaths outnumbered births for the second year in a row after not happening ever before. Record opioid overdose deaths and sharp increases in COVID-19 deaths among persons under age 65 contributed to the decrease in life expectancy. On the more positive side, deaths from Alzheimer's, kidney and chronic lung diseases, and homicides all decreased sharply, while infant mortality continued at a record low level.